

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (CURRENTLY AMENDED) An exercise machine, comprising:
 - a main frame;
 - ~~a user support pivot mount on the main frame;~~
 - a user support frame pivotally mounted on relative to the main frame user support pivot mount for rotation about a user support pivot axis, the ~~pivot mount~~ user support pivot axis defining a vertical, gravitational center line, the user support frame comprising one moving part of the machine;
 - the user support frame having at least a primary support and a secondary support for supporting spaced positions on a user's body ~~in the same relative positions~~ throughout an exercise movement;
 - a user engagement device movably mounted on one of the frames for engagement by the user in performing exercises, the user engagement device comprising a second moving part of the machine;
 - a connecting link linking movement of the user engagement device to movement of the user support frame, the connecting link comprising a third moving part of the machine; and
 - a load for resisting movement of at least one of the moving parts of the machine;whereby movement of the user engagement device in an exercise movement simultaneously moves the user support frame between a start position and an end position, the user support pivot ~~mount~~ axis being positioned such that portions of the combined weight of the user and user support frame are distributed on each side of the gravitational ~~centerline~~ center line of the ~~pivot mount user support pivot axis~~ in both the start and end position and only a portion of the combined weight passes through the gravitational ~~centerline~~ center line during the exercise movement.

2. (ORIGINAL) The machine as claimed in claim 1, wherein the primary support comprises a seat pad.
3. (ORIGINAL) The machine as claimed in claim 2, wherein the secondary support comprises a back pad.
4. (ORIGINAL) The machine as claimed in claim 2, wherein the secondary support comprises a chest pad.
5. (ORIGINAL) The machine as claimed in claim 2, wherein the secondary support comprises thigh hold down pads.
6. (ORIGINAL) The machine as claimed in claim 1, wherein the primary support comprises a back pad.
7. (ORIGINAL) The machine as claimed in claim 6, wherein the secondary support comprises a head rest pad and shoulder rest pads.
8. (ORIGINAL) The machine as claimed in claim 1, including an additional user support for supporting a different part of the user's body from the primary support and secondary support.
9. (ORIGINAL) The machine as claimed in claim 8, wherein the additional user support is mounted on the user support frame.
10. (ORIGINAL) The machine as claimed in claim 8, wherein the additional user support is mounted on the main frame.
11. (ORIGINAL) The machine as claimed in claim 8, wherein the additional user support comprises a foot support for the user's feet.

12. (ORIGINAL) The machine as claimed in claim 8, wherein the additional user support is fixed in position relative to the first two supports throughout an exercise movement.
13. (ORIGINAL) The machine as claimed in claim 8, wherein the additional user support comprises hand grips.
14. (CURRENTLY AMENDED) The machine as claimed in claim 1, wherein the user support frame defines an initial position for the user's body when supported on the frame in the start position of the exercise, and a finish position for the user's body in the end position of the exercise, the gravitational ~~centerline~~ center line extending through a central portion of the user's body in at least one of said initial and finish positions.
15. (CURRENTLY AMENDED) The machine as claimed in claim 14, wherein the gravitational ~~centerline~~ center line of the ~~pivot-mount~~ user support pivot axis extends through the user's hips in at least one of said user positions.
16. (CURRENTLY AMENDED) The machine as claimed in claim 14, wherein the gravitational ~~centerline~~ center line of the ~~pivot-mount~~ user support pivot axis extends through the user's ~~thighs~~ legs in at least one of said user positions.
17. (CURRENTLY AMENDED) The machine as claimed in claim 1, wherein the main frame has a ~~base~~ floor-engaging portion and the ~~pivot-mount~~ user support frame is pivotally mounted on the ~~base~~ floor-engaging portion for rotation about the user support pivot axis.
18. (CURRENTLY AMENDED) The machine as claimed in claim 1, wherein the user support frame has a base member and an upright, the primary user support being mounted on the base member.
19. (CURRENTLY AMENDED) The machine as claimed in claim 18, wherein the further comprising a user support pivot mount, the user support pivot mount comprises comprising a four

bar linkage between the user support frame and the main frame, the four bar linkage defining a theoretical pivot axis of the user support frame pivotal movement, the theoretical pivot axis comprising the user support pivot axis.

20. (CURRENTLY AMENDED) The machine as claimed in claim 18, wherein the ~~pivot mount~~ user support pivot axis is located directly beneath the primary user support.

21. (CURRENTLY AMENDED) The machine as claimed in claim 18, wherein the ~~pivot mount~~ user support pivot axis is located approximately at a junction between the base member and upright of the user support frame.

22. (ORIGINAL) The machine as claimed in claim 1, wherein the user engagement device is movably mounted on the main frame.

23. (ORIGINAL) The machine as claimed in claim 1, wherein the user engagement device is movably mounted on the user support frame.

24. (ORIGINAL) The machine as claimed in claim 1, wherein the user engagement device comprises at least one rigid exercise arm.

25. (CURRENTLY AMENDED) The machine as claimed in claim 1, wherein the user engagement device comprises a at least one flexible member.

26. (ORIGINAL) The machine as claimed in claim 1, wherein the connecting link is a rigid link.

27. (ORIGINAL) The machine as claimed in claim 26, wherein the connecting link has a first end pivoted to said user engagement device and a second end pivoted to said user support frame.

28. (ORIGINAL) The machine as claimed in claim 1, wherein the connecting link is a flexible member.

29. (ORIGINAL) The machine as claimed in claim 1, wherein said connecting link is adjustable in length.
30. (ORIGINAL) The machine as claimed in claim 1, including a slide member slidably mounted on said user support frame, the connecting link having a first end pivoted to said slide member.
31. (ORIGINAL) The machine as claimed in claim 1, wherein the connecting link has a first end pivoted to said user engagement device and a second end pivoted to said main frame, the user support frame being pivotally connected to said user engagement device, whereby movement of said user engagement device is linked to movement of the user support frame.
32. (ORIGINAL) The machine as claimed in claim 1, wherein the connecting link comprises a first gear toothed cam mounted on said user engagement device and a second gear toothed cam mounted on said user support frame and meshing with said first gear toothed cam.
33. (ORIGINAL) The machine as claimed in claim 1, wherein the connecting link comprises a cable and pulley assembly extending between said user engagement device and said user support frame.
34. (ORIGINAL) The machine as claimed in claim 1, wherein the connecting link comprises a moving wedge member slidably engaged with said main frame and user support frame, and said user engagement device is mounted on said moving wedge member.
35. (ORIGINAL) The machine as claimed in claim 1, wherein the user engagement device is adjustable.
36. (CURRENTLY AMENDED) An exercise machine, comprising:
a main frame;
~~a user support pivot mount on the main frame;~~

a user support frame pivotally mounted ~~on~~ relative to the user support pivot mount, ~~the pivot mount main frame for rotation about a user support pivot axis, the user support pivot axis~~ defining a vertical, gravitational center line of the pivotal movement, the user support frame comprising one moving part of the machine;

an exercise arm movably mounted on one of the frames for engagement by the user in performing exercises, the exercise arm having a at least one user engaging portion, and comprising a second moving part of the machine;

a connecting link movably engaged with at least two of the main frame, user support frame and exercise arm for linking movement of the exercise arm to movement of the user support frame, the connecting link comprising a third moving part of the machine; and

a load for resisting movement of at least one of the moving parts of the machine, whereby movement of the user engagement device in an exercise movement simultaneously moves the user support frame between a start position and an end position, the user support pivot ~~mount~~ axis being positioned at a predetermined location ~~under the user support frame and beneath~~ at least a substantial portion of the user's body when supported on the frame, such that portions of the combined weight of the user and user support frame are distributed on each side of the gravitational ~~centerline~~ center line of the pivot ~~mount~~ axis throughout the entire exercise movement between the start and end position, only a portion of the combined weight passing through the gravitational ~~centerline~~ center line during the exercise movement.

37. (CURRENTLY AMENDED) An exercise machine, comprising:

a main frame having a base floor-engaging portion ;

~~a user support pivot mount on the main frame;~~

a user support frame pivotally mounted ~~on the user support pivot mount~~ relative to the main frame for rotation about a user support pivot axis at a location spaced above the ~~base floor-engaging portion~~, the support frame being designed for supporting the body of a user in a predetermined exercise position, the pivot ~~mount~~ axis defining a vertical, gravitational center line of the pivotal movement, the user support frame comprising one moving part of the machine;

the user support frame having at least a primary user support and a secondary user support for supporting different parts of a user's body during an exercise, ~~the user supports being fixed relative to one another during an exercise movement;~~

an exercise arm movably mounted on one of the frames for engagement by the user in performing exercises, the exercise arm having a at least one user engaging portion, and comprising a second moving part of the machine;

a connecting link linking movement of the exercise arm to movement of the user support frame, the connecting link comprising a third moving part of the machine;

a load for resisting movement of at least one of the moving parts of the machine, whereby movement of the user engagement device in an exercise movement simultaneously moves the user support frame and user between a start position and an end position;

~~the pivot-mount user support pivot axis~~ being located under at least a substantial portion of the user support frame at a location directly beneath the user's body when supported on the frame during at least part of an exercise movement.

38. (CURRENTLY AMENDED) The machine as claimed in claim 37, including an additional user support mounted on the user support frame ~~and being fixed relative to the user support frame during an exercise movement so as to move with and moving with~~ the user support frame ~~in the same orientation relative to the frame.~~

39. (ORIGINAL) The machine as claimed in claim 37, wherein the additional user support comprises at least one foot support plate.

40. (CURRENTLY AMENDED) The machine as claimed in claim 37, wherein the gravitational centerline center line passes through a central portion of the user's body in at least one of the start and end positions.

41. (CURRENTLY AMENDED) The machine as claimed in claim 40, wherein the gravitational centerline ~~of the pivot-mount~~ center line passes through the user's hips in at least one of the start and end positions.

42. (CURRENTLY AMENDED) The machine as claimed in claim 40, wherein the gravitational centerline of the pivot mount center line passes through the user's ~~upper thighs~~ legs in at least one of the start and end positions.
43. (ORIGINAL) The machine as claimed in claim 37, wherein the connecting link is a rigid member.
44. (ORIGINAL) The machine as claimed in claim 37, wherein the connecting link is a flexible member.
45. (ORIGINAL) The machine as claimed in claim 37, wherein the connecting link is adjustable in length.
46. (ORIGINAL) The machine as claimed in claim 37, wherein the exercise arm comprises at least one rigid member.
47. (ORIGINAL) The machine as claimed in claim 46, wherein the exercise arm comprises a pair of articulating arm members mounted on opposite sides of the user support frame.
48. (CURRENTLY AMENDED) The machine as claimed in claim 37, wherein the exercise arm comprises a at least one flexible member.
49. (ORIGINAL) The machine as claimed in claim 37, wherein the exercise arm is adjustable.
50. (CURRENTLY AMENDED) An exercise machine, comprising:
a main frame having a base floor-engaging portion;
~~a user support pivot mount on the main frame;~~
a user support frame pivotally mounted on the ~~user support pivot mount~~ main frame for rotation about a user support pivot axis at a location spaced above the base floor-engaging portion.

the support frame being designed for supporting the body of a user in a predetermined exercise position, the pivot ~~mount~~ axis defining a vertical, gravitational center line of the pivotal movement, the user support frame comprising one moving part of the machine;

the user support frame having at least a primary user support and a secondary user support for supporting different parts of a user's body during an exercise, ~~the user supports being fixed relative to one another during an exercise movement;~~

an exercise arm movably mounted on one of the frames for engagement by the user in performing exercises, the exercise arm having a at least one user engaging portion, and comprising a second moving part of the machine;

a connecting link linking movement of the exercise arm to movement of the user support frame, the connecting link comprising a third moving part of the machine;

a load for resisting movement of at least one of the moving parts of the machine, whereby movement of the user engagement device in an exercise movement simultaneously moves the user support frame and user between a start position and an end position; and

~~the pivot mount~~ user support pivot axis being positioned such that portions of the combined weight of the user and user support frame are distributed on each side of the gravitational ~~centerline~~ center line of the ~~pivot mount~~ user support pivot axis in both the start and end position and a portion of the combined weight passes through the gravitational ~~centerline~~ center line during the exercise movement.

51. (NEW) The machine as claimed in claim 2, wherein the secondary support comprises a leg support.

52. (NEW) The machine as claimed in claim 51, wherein the secondary support is a foot rest.

53. (NEW) The machine as claimed in claim 1, wherein the primary and secondary supports are adapted to support spaced positions on the user's body in the same relative positions throughout an exercise movement.

54. (NEW) The machine as claimed in claim 14, wherein the gravitational center line of the user support pivot axis extends through the user's thighs in at least one of said user positions.
55. (NEW) The machine as claimed in claim 1, wherein the user support pivot axis is located directly behind the primary user support.
56. (NEW) The machine as claimed in claim 18, wherein the user support pivot axis is located on the upright of the user support frame.
57. (NEW) The machine as claimed in claim 37, wherein the user supports are fixed relative to one another during an exercise movement.
58. (NEW) The machine as claimed in claim 38, wherein the additional user support is fixed relative to the user support frame during an exercise movement so as to move with the user support frame in the same orientation relative to the frame.